ABSTRACT

The invention relates to a method and an apparatus for distribution of bandwidth in a switch or router. More particularly, the invention relates to a scheduler and an associated algorithm for distributing bandwidth over data traffic directed to output ports and received in various traffic classes and flows. The switch comprises a switching fabric. Preferably, the bandwidth scheduler is located before output queues, and the method comprises: receiving a stream of data from the switching fabric; subjecting the stream to a decision making algorithm in the bandwidth scheduler resulting in that the stream is forwarded or interrupted (accepted or rejected). Preferably, the stream of data includes identifiable data packets and the decision making algorithm in the bandwidth scheduler results in that the data packet is accepted or rejected. The bandwidth scheduler may be located before the output queues leading to early discarding of packets and efficient use of output buffer memory. The algorithm includes logical rules operating on counters and variables recording the accepted traffic to implement the bandwidth distribution. The algorithm enables weighted distribution and short term as well as long term fairness.